LAPORAN TUGAS PEMROGRAMAN BERBASIS FRAMEWORK

UTS
MarketPlace Single Page Application Framework React

Disusun Oleh :

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Langkah-langkah Pembuatan

Langkah	Keterangan
1	Buat Project baru yang akan digunakan untuk membuat aplikasi React

```
PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek> npx create-react-app mid-term-test-hunayn

Creating a new React app in D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek\mid-term-test-hunayn.

Installing packages. This might take a couple of minutes.
Installing react, react-dom, and react-scripts with cra-template...


> core-js@2.6.12 postinstall D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek\mid-term-test-hunayn\node_modules\babel-ru
ntime\node_modules\core-js
> node -e "try{require('./postinstall')}catch(e){}"


> core-js@3.9.1 postinstall D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek\mid-term-test-hunayn\node_modules\core-js
> node -e "try{require('./postinstall')}catch(e){}"


> core-js-pure@3.9.1 postinstall D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek\mid-term-test-hunayn\node_modules\core
-js-pure
> node -e "try{require('./postinstall')}catch(e){}"

  npm run eject
    Removes this tool and copies build dependencies, configuration files
    and scripts into the app directory. If you do this, you can't go back!

We suggest that you begin by typing:

  cd mid-term-test-hunayn
  npm start

Happy hacking!
PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek>
```

Lakukan instalasi bootstrap untuk membantu dalam melakukan modifikasi front-end aplikasi

```
PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek\mid-term-test-hunayn> npm install bootstrap
npm WARN @babel/plugin-bugfix-v8-spread-parameters-in-optional-chaining@7.13.12 requires a peer of @babel/core@^7.13.0 but none is installed. You
must install peer dependencies yourself.
npm WARN tsutils@3.21.0 requires a peer of typescript@>=2.8.0 || >= 3.2.0-dev || >= 3.3.0-dev || >= 3.4.0-dev || >= 3.5.0-dev || >= 3.6.0-dev || >
= 3.6.0-beta || >= 3.7.0-dev || >= 3.7.0-beta but none is installed. You must install peer dependencies yourself.
npm WARN bootstrap@4.6.0 requires a peer of jquery@1.9.1 - 3 but none is installed. You must install peer dependencies yourself.
npm WARN bootstrap@4.6.0 requires a peer of popper.js@^1.16.1 but none is installed. You must install peer dependencies yourself.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.3.2 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32"
,"arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\watchpack-chokidar2\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32
","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\webpack-dev-server\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32
","arch":"x64"})

+ bootstrap@4.6.0
added 1 package from 2 contributors and audited 1952 packages in 18.374s

136 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities

PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek\mid-term-test-hunayn>
```

Lakukan instalasi Fake API menggunakan json server pada root project

```
PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek\mid-term-test-hunayn> npm install -gjson-server
npm WARN @babel/plugin-bugfix-v8-spread-parameters-in-optional-chaining@7.13.12 requires a peer of @babel/core@^7.13.0 but none is installed. You
must install peer dependencies yourself.
npm WARN bootstrap@4.6.0 requires a peer of jquery@1.9.1 - 3 but none is installed. You must install peer dependencies yourself.
npm WARN bootstrap@4.6.0 requires a peer of popper.js@^1.16.1 but none is installed. You must install peer dependencies yourself.
npm WARN tsutils@3.21.0 requires a peer of typescript@>=2.8.0 || >= 3.2.0-dev || >= 3.3.0-dev || >= 3.4.0-dev || >= 3.5.0-dev || >= 3.6.0-dev || >
= 3.6.0-beta || >= 3.7.0-dev || >= 3.7.0-beta but none is installed. You must install peer dependencies yourself.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\webpack-dev-server\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32
","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.3.2 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32
","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\watchpack-chokidar2\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32
","arch":"x64"})

audited 1952 packages in 16.51s

136 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities

PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek\mid-term-test-hunayn>
```

Tambahkan library react-router dengan menginstall react-router-dom menggunakan syntax "npm install react-router-dom"

```
PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek\mid-term-test-hunayn> npm install react-router-dom
npm WARN @babel/plugin-bugfix-v8-spread-parameters-in-optional-chaining@7.13.12 requires a peer of @babel/core@^7.13.0 but none is installed. You
must install peer dependencies yourself.
npm WARN bootstrap@4.6.0 requires a peer of jquery@1.9.1 - 3 but none is installed. You must install peer dependencies yourself.
npm WARN bootstrap@4.6.0 requires a peer of popper.js@^1.16.1 but none is installed. You must install peer dependencies yourself.
npm WARN tsutils@3.21.0 requires a peer of typescript@>=2.8.0 || >= 3.2.0-dev || >= 3.3.0-dev || >= 3.4.0-dev || >= 3.5.0-dev || >= 3.6.0-dev || >
= 3.6.0-beta || >= 3.7.0-dev || >= 3.7.0-beta but none is installed. You must install peer dependencies yourself.
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@2.3.2 (node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@2.3.2: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32
","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\watchpack-chokidar2\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32
","arch":"x64"})
npm WARN optional SKIPPING OPTIONAL DEPENDENCY: fsevents@1.2.13 (node_modules\webpack-dev-server\node_modules\fsevents):
npm WARN notsup SKIPPING OPTIONAL DEPENDENCY: Unsupported platform for fsevents@1.2.13: wanted {"os":"darwin","arch":"any"} (current: {"os":"win32
","arch":"x64"})

+ react-router-dom@5.2.0
added 11 packages from 6 contributors and audited 1963 packages in 23.574s

136 packages are looking for funding
  run `npm fund` for details

found 0 vulnerabilities

PS D:\data\Users\User\Documents\College\Framework Prog\framework_prog\8thWeek\mid-term-test-hunayn> []
```

Pada index.js lakukan pemanggilan MarketView dari import yang telah didefinisikan

```
src > JS index.js
   1  import React from "react";
   2  import ReactDOM from "react-dom";
   3  import "bootstrap/dist/css/bootstrap.min.css";
   4  import "./index.css";
   5  import App from "./App";
   6  // import reportWebVitals from "./reportWebVitals";
   7  import * as serviceWorker from "./serviceWorker";
   8  import MarketView from "./stateful/MarketView";
   9  import MarketModel from "./stateless/MarketModel";
  10
  11  ReactDOM.render(
  12    // <React.StrictMode>
  13    //   <App />
  14    // </React.StrictMode>
  15    <MarketView />,
  16    document.getElementById("root")
  17  );
  18
  19  // If you want to start measuring performance in your app, pass a function
  20  // to log results (for example: reportWebVitals(console.log))
  21  // or send to an analytics endpoint. Learn more: https://bit.ly/CRA-vitals
  22  // reportWebVitals();
  23  serviceWorker.unregister();
  24
```

Buat constant baru pada MarktView untuk melakukan menyimpan dan mendefinisakan status autentikasi dari user yang sedang menggunakan web

```
18    const fakeAuth = {
19      isAuthenticated: false,
20      authenticate(cb) {
21        fakeAuth.isAuthenticated = true;
22        setTimeout(cb, 100); // fake async
23      },
24      signout(cb) {
25        fakeAuth.isAuthenticated = false;
26        setTimeout(cb, 100);
27      },
28    };
29
```

Tambahkan function AuthButton untuk membuat button ketika user akan logout dengan conditional dari const fakeAuth

```
30    function AuthButton() {
31      let history = useHistory();
32
33      return fakeAuth.isAuthenticated ? (
34        <div className="row">
35          <div className="col-12">
36            <p className="ml-4 font-weight-bold lead">
37              Welcome you are Logged in!{" "}
38              <div className="row">
39                <div className="col-12 mt-3">
40                  <button
41                    type="button"
42                    className="btn btn-danger"
43                    onClick={() => {
44                      fakeAuth.signout(() => history.push("/home"));
45                    }}
46                  >
47                    Log Out
48                  </button>
49                </div>
50              </div>
51            </p>
52          </div>
53        </div>
54      ) : (
55        <div className="container-fluid px-0">
56          <div className="row">
```

Buat function baru apabila user akan mengakses page yang membutuhkan login dan mengelola reaksi yang diberikan web

```
65    function PrivateRoute({ children, ...rest }) {
66      return (
67        <Route
68          {...rest}
69          render={({ location }) =>
70            fakeAuth.isAuthenticated ? (
71              children
72            ) : (
73              <Redirect
74                to={{
75                  pathname: "/login",
76                  state: { from: location },
77                }}
78              />
79            )
80          }
81        />
82      );
83    }
84
```

Tambahkan funtion Home yang akan dipanggil ketika user menuju Link dengan endpoint (/home)

```
85    function Home() {
86      return (
87        <div className="container-fluid px-0" style={{ height: "276px" }}>
88          <br />
89          <table className="table">
90            <div className="row">
91              <div className="col-4">
92                <tbody>
93                  <tr>
94                    <td style={{ paddingLeft: "100px", paddingRight: "90px" }}>
95                      <img
96                        src="https://www.pngkey.com/png/full/827-8273413_jax-r-series-white-micom-rice-cooker-with.
97                        width="250"
98                        height="200"
99                        alt="show"
100                     />
101                   </td>
102                 </tr>
103               </tbody>
104             </div>
105             <div className="col-4">
106               <tbody>
107                 <tr>
108                   <td style={{ paddingLeft: "100px", paddingRight: "90px" }}>
109                     <img
110                       src="https://www.pngkey.com/png/full/372-3721130_but-while-using-an-electric-cooker-might-b
111                       width="250"
112                       height="200"
```

Tambahnkan funtion About untuk menuju ke menu About dan menampilkan isi dari return function tersebut pada halaman web

```
139    function About() {
140      return (
141        <div className="container-fluid px-0" style={{ height: "317px" }}>
142          <div className="row">
143            <div className="col-3"></div>
144            <div className="col-3">
145              <td>
146                <img src={photo} width="300" height="300" alt="myphoto" />
147              </td>
148            </div>
149            <div className="col-3">
150              <h4 class="display-6 text-dark font-weight-normal">
151                <small>Hunayn Risatayn</small>
152              </h4>
153              <h4 class="display-6 text-dark font-weight-normal">
154                <small>081222200039</small>
155              </h4>
156              <h4 class="display-6 text-dark font-weight-normal">
157                <small>Informatics Engineering</small>
158              </h4>
159              <h4 class="display-6 text-dark font-weight-normal">
160                <small>Binging movies</small>
161              </h4>
162              <h4
163                class="display-6 text-dark font-weight-normal"
164                style={{ paddingTop: "7px" }}
165              >
```

Tambahkan state untuk menyimpan data yang didapatkan setelah GET dari API lokal dan state untuk menyimpan total spend dari user ketika berbelanja

```
241    class MarketView extends Component {
242      state = {
243        // komponen state dari React untuk stateful component
244        listProduct: [], // variable array yang digunakan untuk menyimpan data API
245        tmpBasket: {
246          id: "",
247          nama_produk: "",
248          harga: "",
249          gambar: "",
250          stok: "",
251        },
252        tmpProduct: {
253          id: "",
254          nama_produk: "",
255          harga: "",
256          gambar: "",
257          stok: "",
258        },
259        listBasket: [],
260        sum: 0,
261      };
262
```

Tambahkan method untuk megambil data dari server pertama yaitu menghandle listProduct dan server kedua yang menghandle basket/keranjang

```
263    ambilDataDariServerAPI() {
264      // fungsi untuk mengambil data dari API dengan penambahan sort dan order
265      fetch("http://localhost:3001/posts?_sort=id&_order=asc") // penambahan sort dan order berdasarkan parameter
266        .then((response) => response.json()) // ubah response data dari URL API menjadi sebuah data JSON
267        .then((jsonHasilAmbilDariAPI) => {
268          // data JSON hasil ambil dari API kita masukkan ke dalam listArtikel pada state
269          this.setState({
270            listProduct: jsonHasilAmbilDariAPI,
271          });
272        });
273    }
274
275    ambilDataDariServerAPIBasket() {
276      // fungsi untuk mengambil data dari API dengan penambahan sort dan order
277      fetch("http://localhost:3002/posts?_sort=id&_order=asc") // penambahan sort dan order berdasarkan parameter
278        .then((response) => response.json()) // ubah response data dari URL API menjadi sebuah data JSON
279        .then((jsonHasilAmbilDariAPIBasket) => {
280          // data JSON hasil ambil dari API kita masukkan ke dalam listArtikel pada state
281          this.setState({
282            listBasket: jsonHasilAmbilDariAPIBasket,
283          });
284        });
285
```

Tambahnkan function ketika component pada project berhasil dilakukan mount dan function lain untuk menghandle product yang dibeli user dan melakukan GET berdasarkan idProduct tersebut pada server

```
296    componentDidMount() {
297      // komponen untuk mengecek ketika component telah di-mount-ing, maka panggil API
298      this.ambilDataDariServerAPI(); //  ambil data dari server API lokal
299      this.ambilDataDariServerAPIBasket();
300    }
301
302    handleBuyProduct = (data) => {
303      fetch(`http://localhost:3001/posts/${data}`)
304        .then((response) => response.json()) // ubah response data dari URL API menjadi sebuah data JSON
305        .then((jsonHasilAmbilDariAPIBuyIdVal) => {
306          // data JSON hasil ambil dari API kita masukkan ke dalam listArtikel pada state
307          this.setState({
308            tmpBasket: jsonHasilAmbilDariAPIBuyIdVal,
309          });
310        })
311        .then(this.updateStock)
312        // .then(this.updateStockCatalog(data))
313        .then(this.handleAddtoBasket);
314      // .then(() => {
315      //   this.ambilDataDariServerAPIBasket();
316      // });
317    };
318
```

Buat function untuk menghapus produk yang telah ditambahnkan pada basket/keranjang

```
335    handleDelBasket = (data) => {
336      fetch(`http://localhost:3002/posts/${data}`, {
337        method: "DELETE",
338      }).then(() => {
339        this.ambilDataDariServerAPIBasket();
340      });
341    };
342
```

Lakukan map dari listProduct kedalam MarketModel berdasarkan element yang ada pada listProduct.json

```
483                {this.state.listProduct.map((product) => {
484                  // looping dan masukkan untuk setiap data yang ada di listArtikel ke variable artikel
485                  return (
486                    <MarketModel
487                      key={product.id}
488                      idProduct={product.id}
489                      namaProduct={product.nama_produk}
490                      hargaProduct={product.harga}
491                      photoProduct={product.gambar}
492                      stockProduct={product.stok}
493                      buyProduct={this.handleBuyProduct}
494                    />
495                  ); // mappingkan data JSON dari API sesuai dengan kategorinya
496                })}
```

Lakukan map/pemetaan untuk setiap element yang ada pada basket/keranjang pada file basket.json ke dalam Basket yang telah diimport sebelumnya

```
536                {this.state.listBasket.map((basket) => {
537                  // looping dan masukkan untuk setiap data yang ada di listArtikel ke variable artikel
538                  return (
539                    <Basket
540                      key={basket.id}
541                      idBasket={basket.id}
542                      namaBasket={basket.nama_produk}
543                      hargaBasket={basket.harga}
544                      photoBasket={basket.gambar}
545                      stockBasket={basket.stok}
546                      delBasket={this.handleDelBasket}
547                    />
548                  ); // mappingkan data JSON dari API sesuai dengan kategorinya
549                })}
```

Panggil function About pada Route dengan path (/about) untuk menampilkan halaman tersebut ketika user memilih menu about

```
571            <Route path="/about">
572              <br />
573              <br />
574              <div className="container-fluid px-0">
575                <AuthButton />
576                <div className="row" style={{ paddingBottom: "10px" }}>
577                  <div className="col-4"></div>
578                  <div className="col-4">
579                    <h1
580                      class="display-4 text-dark"
581                      style={{ paddingLeft: "105px" }}
582                    >
583                      About me
584                    </h1>
585                  </div>
586                  <div className="col-4"></div>
587                </div>
588                <About />
589              </div>
590            </Route>
```

Sebelumnya buatlah file listProduct.json dan file basket.json untuk menyimpan data dan akan dimonitor oleh server pertama dan kedua respectively

```json
{
  "posts": [
    {
      "id": 1,
      "nama_produk": "Jax-R Series White Micom Rice Cooker With Tacook Cooking - Rice Cooker",
      "harga": 625000,
      "gambar": "https://www.pngkey.com/png/full/827-8273413_jax-r-series-white-micom-rice-cooker-with.png",
      "stok": 3
    },
    {
      "id": 2,
      "nama_produk": "Panasonic Rice Cooker - Panasonic 0.6 L Rice Cooker",
      "harga": 710000,
      "gambar": "https://www.pngkey.com/png/full/498-4987999_electric-rice-cooker-commercial-rice-cooker.png",
      "stok": 8
    },
    {
      "id": 3,
      "nama_produk": "Morphy Richards Rice N More DLX 1.8-Litre 700-Watt Stainless Steel Electric Rice Cooker",
      "harga": 570000,
      "gambar": "https://www.pngkey.com/png/full/372-3721130_but-while-using-an-electric-cooker-might-be.png",
      "stok": 4
    },
    {
      "id": 4,
      "nama_produk": "RCF-8C - Rice Cooker 3d New Generation",
      "harga": 835000,
```

Pada MarketModel buatlah constant untuk menangkap value yang dikirim dari MarketView menggunakan props dan meletakkannya berdasarkan isi yang akan ditampilkan pada web

```jsx
const MarketModel = (props) => {
  return (
    <div className="container-fluid bg-secondary">
      <div className="row">
        <div className="col-12 mt-4">
          <table className="table table-dark">
            {/* <thead>
              <tr>
                <th>Barang</th>
                <th>Action</th>
              </tr>
            </thead> */}
            <tbody>
              <tr>
                <td style={{ paddingLeft: "90px", paddingTop: "50px" }}>
                  <p className="text-justify">{props.namaProduct}</p>
                </td>
                <td style={{ paddingLeft: "130px", paddingRight: "90px" }}>
                  <img
                    src={props.photoProduct}
                    width="200"
                    height="150"
                    alt="show"
                  />
                </td>
                <td
                  style={{
```

Link GitHub : https://github.com/hunaynr/framework_prog/tree/main/8thWeek

Link Youtube : https://youtu.be/gqZapFqj5oo